IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:		§		
	Reuven Lavie	§	Art Unit:	2833
		§		
Serial No.:	10/644,416	§		
		§	Examiner:	Tho Dac Ta
Filed:	August 20, 2003	§		
		§		
For:	Reducing Cross Talk	§	Atty Docket:	ITL.1000US
	at Ethernet Connectors	§		P16572
		§		

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SECOND SUPPLEMENTAL APPEAL BRIEF

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REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claims 1-8 (Rejectcd).

Claim 9 (Canceled).

Claims 10-24 (Rejected).

Claims 1-8 and 10-24 are rejected. Each rejection is appealed.

STATUS OF AMENDMENTS

No amendments were made in the Reply to Final Rejection submitted on July 30, 2004. All amendments have therefore been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 calls for capacitively coupling a pair of terminals of an Ethernet connector to reduce cross talk. This is best seen in Figure 3 where the terminals are marked 75 and the capacitive coupling is indicated by 85. See page 5 of the specification, line 1, through page 6, line 5.

The claim also calls for an Ethernet connector. An Ethernet connector is explained in the detailed description at page 3, lines 10-18. See the portion of the Ethernet Specification, attached. The document explains that Ethernet connectors are a recognized term of art and must comply with specific requirements. See the Evidence Appendix at pages 1-3.

Claim 8 calls for a network connector including a non-conductive housing having a jack. The housing is the item 20 in Figure 1, which is described in the specification at page 3, lines 19-24. Claim 8 further calls for a plurality of Ethernet terminals to receive Ethernet network signals. These terminals may be seen at Figure 2A at 35. They are described in the specification at page 4, lines 7-10. Claim 8 calls for a first capacitor coupling a first pair of said Ethernet terminals. The first capacitor would be the capacitor 60b shown in Figure 2A and described at page 5, lines 21-23. Finally, claim 8 calls for a second capacitor couples a second pair of Ethernet terminals, said terminals to contact mating Ethernet connectors. The second capacitor would be the capacitor 60a, also shown in Figure 2A and described in the specification at page 5, lines 23-25.

In claim 17, the Ethernet eonnector having terminals may be the element 10 shown in Figure 1 and the terminals may be the elements 35 shown in Figure 2A and described as specified above. Claim 17 calls for the selected pair of terminals are capacitively coupled to nonadjacent terminals. This is explained in the specification at page 5, line 21-page 6, line 5.

Claim 20 calls for processor which is shown, for example, in Figure 5 at 160. Further it calls for a network adapter coupled to the processor, the network adapter including an Ethernet connector having terminals wherein a pair of said terminals are capacitively coupled. The connector is the item 10 shown in Figure 1, the terminals are the items 35 shown in Figure 2A, and the pair of terminals being capacitively coupled is described at page 5.

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. **Whether claims 1-7 are anticipated under 35 U.S.C. § 102(b) by Paulson (US 5,938,479).**

B. **Whether claims 8 and 10-16 are anticipated under 35 U.S.C. § 102(b) by Paulson (US 5,938,479).**

C. **Whether claim 17 is anticipated under 35 U.S.C. § 102(b) by Paulson (US 5,938,479).**

D. **Whether claims 18-24 are unpatentable under 35 U.S.C. § 103(a) over Paulsen (US 5,938,479).**

ARGUMENT

A. **Are claims 1-7 anticipated under 35 U.S.C. § 102(b) by Paulson (US 5,938,479)?**

One issue is whether Paulson teaches an Ethernet connector as claimed. Paulson does not relate to an RJ-45 type of connector.

The office action cites the material in the specification at page 1. That material, specifically at page 1, lines 10-12, is not specific to Ethernet connectors, but simply refers to types of connectors that can connect network nodes. Moreover, if it were to refer to Ethernet connectors, the phrase "standard connectors" would refer to those connectors that are standard for Ethernet. In other words, there is no reason, even under such an interpretation, to read "standard" as relating to a standard other than Ethernet when Ethernet connectors are involved.

As indicated in the attached document relating to Ethernet connectors, Ethernet connectors must comply with specific requirements. See Evidence Appendix at pages 6-8. Thus, "Ethernet connector" cannot legitimately be equated to cover any connector. In other words, it is improper to simply read Ethernet out of the claim.

Thus, there is simply no reason to believe that any connector can be utilized in Ethernet. Ethernet requires a specific type of connector, that connector is claimed, and the cited reference has no such thing.

Therefore, the rejection of claims 1-7 should be reversed.

Nothing in Paulson in any way suggests any of the limitations in dependent claims, such as dependent claims 3 and 4.

"Ethernet terminals" are structure. An Ethernet terminal is one that can be utilized pursuant to the Ethernet standard. It does not refer to any terminal because to do so would simply read the word Ethernet out of the claim.

Therefore, the rejections of claims 3 and 4 should also be reversed.

Again, it is improper to simply read the word Ethernet out of the claims. There is absolutely no statutory basis for doing so.

B. Are claims 8 and 10-16 anticipated under 35 U.S.C. § 102(b) by Paulson (US 5,938,479)?

Claim 8 calls for a non-conductive housing having a jack and terminals to contact mating Ethernet connectors. No office action to date has indicated where such elements could possible be found within Paulson.

Therefore, a *prima facie* rejection is not made out and the rejection should be reversed.

C. Is claim 17 anticipated under 35 U.S.C. § 102(b) by Paulson (US 5,938,479)?

Claim 17 calls for an Ethernet connector having terminals wherein a selected pair of terminals are capacitively coupled to non-adjacent terminals.

Again, the rejection of claim 17 is based on the idea of simply reading an "Ethernet connector" to be any connector. Only by reading out Ethernet before connector is a *prima facie* rejection made out. Since this is impermissible, the rejection should be reversed.

D. Are claims 18-24 unpatentable under 35 U.S.C. § 103(a) over Paulsen (US 5,938,479)?

For the reasons set forth above with respect to claims 1-7, the rejeetion should be reversed.

Respectfully submitted,

Date: 2/4/2009

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CLAIMS APPENDIX

The claims on appeal are:

1. A method comprising:

capacitively coupling a pair of terminals of an Ethernet connector to reduce cross talk.

2. The method of claim 1 further including:

coupling a first capacitor between a first pair of terminals and coupling a second capacitor between a second pair of terminals.

3. The method of claim 1 further including:

coupling a capacitor between the terminals coupled to B+ and C- channels.

4. The method of claim 3 including coupling a capacitor between the C+ and B- channels.

5. The method of claim 1 including coupling an adjacent channel to a non-adjacent channel by a capacitor.

6. The method of claim 1 including coupling a capacitor between complementary channels.

7. The method of claim 1 including reducing near end cross talk by capaeitively coupling non-adjacent channels.

8. A network connector comprising:

a non-conductive housing having a jack;

a plurality of Ethernet terminals to receive Ethernet network signals;

a first capaeitor to couple a first pair of said Ethernet terminals; and

a seeond capacitor to couple a second pair of said Ethernet terminals, said terminals to contact mating Ethernet connectors.

10. The network connector of claim 8 wherein said first pair of terminals include terminals to receive B+ and C- channels.

11. The network connector of claim 10 wherein said second pair of terminals include terminals to receive the C+ and B- channels.

12. The network connector of claim 8 wherein said first pair of terminals are coupled to complementary channels.

13. The network connector of claim 12 wherein said second pair of said terminals are coupled to complementary channels.

14. The network connector of claim 8 wherein said connector is an Ethernet connector.

15. The network connector of claim 14 wherein said network connector is a fast Ethernet connector.

16. The network connector of claim 14 wherein said network connector is a Gigabit Ethernet connector.

17. A network adapter comprising:

an Ethernet connector having terminals, wherein a selected pair of terminals are capacitively coupled to non-adjacent terminals.

18. The network adapter of claim 17 further comprising:

a network interface card; and

Ethernet networking circuitry located on said network interface card to enable a multi-Gigabit Ethernet connection over a network.

19. The network adapter of claim 18 wherein said Ethernet connector including:

a first capacitor to couple a first pair of said terminals to receive first channel signals and a second capacitor to couple a second pair of said terminals to receive second channel signals.

20. A processor-based system comprising:

a processor; and

a network adapter coupled to said processor, said network adapter including an Ethernet connector having terminals, wherein a pair of said terminals are capacitively coupled.

21. The processor-based system of claim 20, said connector further comprising:

a first capacitor to couple a first pair of said terminals that are non-adjacent and a second capacitor to couple a second pair of terminals that are non-adjacent.

22. The processor-based system of claim 21 further comprising:

a network interface card coupled to said processor; and

Ethernet networking circuitry located on said network interface card to enable a multi-Gigabit Ethernet connection over a network.

23. The processor-based system of claim 22 wherein said Ethernet networking circuitry including:

a first capacitor to couple a first pair of said terminals and a second capacitor to couple a second pair of said terminals of said channels.

24. The processor-based system of claim 23 wherein said first and second capacitors to reduce near end cross talk.

EVIDENCE APPENDIX

See on the following pages:

IEEE Standards 802.3®, Part 3: Carrier sense multiple access with collision detection (CSMA/CD) aceess method and physical layer specifications, IEEE Std. 802.3-2002®, Institute of Electrical and Electronics Engineers, Inc. (March 8, 2002).

IEEE Std 802.3-2002®
(Revision of IEEE Std 802.3®, 2000 Edition)

IEEE standards

802.3®

IEEE Standard for Information technology—

Telecommunications and information exchange between systems—

Local and metropolitan area networks—

Specific requirements

Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications

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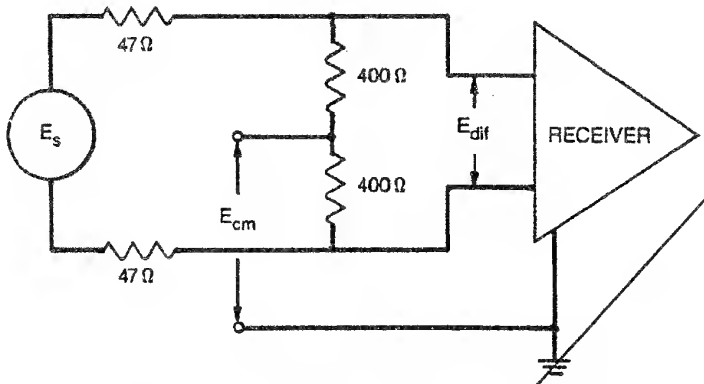

Figure 12–29—Receiver common-mode rejection

12.5.3.2.6 Noise immunity

Receivers shall meet the following limits on average error rates when the noise described in 12.7.4 is added to the signals described in 12.5.3.2.1 and 12.5.3.2.2:

a) When nonidle, the receiver error rate shall not exceed one error in 10^8 bits.
b) When idle, a receiver used in a DTE shall not falsely detect carrier more than one in 100 s.
c) When idle, a receiver used in a hub shall not falsely detect carrier more than once in 1500 s.

NOTE—Receivers whose inputs include a 2–4 MHz, 2-pole, low-pass, Butterworth filter and a 560 mV squelch level will meet this last requirement for idle-mode noise immunity yet still perform properly with the weakest signal allowed by 12.5.3.2.1.

12.5.3.2.7 Receiver fault tolerance

Receivers shall tolerate the application of short circuits across their inputs for an indefinite period of time without damage and shall resume normal operation after such faults are removed.

Receivers shall withstand, without damage, a 1000 V common-mode impulse of either polarity, applied as indicated in Figure 12–27. The shape of the impulse shall be 0.3/50 μs (300 ns virtual front time, 50 μs virtual time of half value), as defined in IEC 60060.

NOTE—Tolerance of, and recovery from, the application of the telephony voltages described in 12.10.2 is optional, but the safety requirements of that subclause are mandatory.

12.6 Medium Dependent Interface (MDI) specification

12.6.1 Line interface connector

8-pin connectors meeting the requirements of Clause 3 and Figures 1 through 5 of ISO/IEC 8877: 1992 shall be used as the compatibility interface between the PMA and the medium. The use of other types of connectors, if any, within a PMA or within the medium, although not explicitly prohibited, is outside the scope of this standard.

12.6.2 Connector contact assignments

The contacts of the connectors, as depicted in Figure 12–32 and Figure 12–31, shall correspond to signaling circuits as indicated below:

Contact	Signal
1	Upward Data+ (positive for HI signal)
2	Upward Data– (negative for HI signal)
3	Downward Data+ (positive for HI signal)
4	not used by 1BASE5
5	not used by 1BASE5
6	Downward Data– (negative for HI signal)
7	reserved
8	reserved

For DTEs and the upper MDI of hubs, contacts 1 and 2 are used for transmitting and contacts 3 and 6 are used for receiving. For the port MDIs of hubs, however, contacts 1 and 2 are used for receiving and contacts 3 and 6 are used for transmitting.

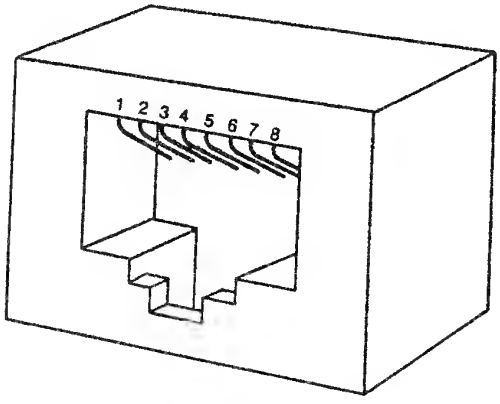

Figure 12–30—DTE and hub connector

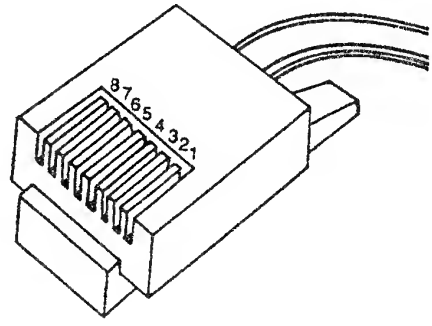

Figure 12–31—Cable connector

12.6.3 Labeling

To distinguish 1BASE5 connectors from those used for other purposes, it is recommended that appropriate labels be affixed to wall outlets and other connectors. This is particularly important in environments in which the specified 8-contact connectors are used for more than one purpose.

RELATED PROCEEDINGS APPENDIX

None.